Weekly Report

11/17/2014-11/23/2014

Reserach

This week, I have finished reading the eighth chapter about Adaboost. Also, I find a book: The Elements of Statistical Learning, which discuss adaboost in more detail.

Continuely, I read the paper:Dimensionality Reduction for Documents with Nearest Neighbor Queries[3] . The author contributes the Q-SNE algorithm that represents a more accurate neighborhood structure of the data than BH-SNE. In order to understand Q-SNE, iI read two papers about APQ[2] and SNE[1].

I plan to use cublas library in my program. I find a function called cublasdot() whose's result is $\sum_{i=1}^{n} x_i * y_i$. However, I need a function to calculate Hadamard product.($z_i = x_i * y_i$).

Plan for next week

- I will search hadamard product function that is supposed to compute faster or write it by myself.
- Learn EM algorithm.

References

[1] Geoffrey E Hinton and Sam T Roweis. Stochastic neighbor embedding. In *Advances in neural information processing systems*, pages 833–840, 2002.

[2] Stephen Ingram. *Practical Considerations for Dimensionality Reduction.* PhD thesis, Citeseer, 2013.

[3] Stephen Ingram and Tamara Munzner. Dimensionality reduction for documents with nearest neighbor queries. *Neurocomputing, this issue.*